EFFECTIVENESS OF BROWNFIELD DEVELOPMENT FOR LONDON'S HOUSING SUPPLY

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ABSTRACT

The continued lack of UK housing supply in relation to demand has caused a number of issues. These issues impact negatively on key urban areas; so far London has been the most affected by the shortfall in housing supply. The root cause was identified as 'constraints on land supply' (Barker 2004) which in turn prevents the housing market from functioning to the laws of supply and demand. There have been a number of government driven initiatives in recent years and their focus for additional housing to tackle undersupply has been on existing towns and cities. In London, the Government Office for London (GOL), the Greater London Authority (GLA) and the Association of London Government (ALG) are actively working together with Boroughs and other key stakeholders with the central objective of increasing housing supply across London. Most importantly the ethos has been to achieve this by creating mixed and balanced communities and increasing the supply of new homes of appropriate sizes across all tenures so that more people can be housed.

Social and capital infrastructures are needed to support this growth and to create well designed sustainable communities. The London Housing Strategy sets the context for this. The Government intends to promote more sustainable patterns of development by making better use of Previously Developed Land (PDL) and increasing housing densities on them at the same time. Because current housing policies promote brownfield regeneration, sustainable development and affordable housing in key areas as a solution to the shortage in housing supply, the research question therefore asks: ***"Has Brownfield development as a sustainable solution to shortfalls in housing supply been effective in London so far?"***

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To my family, for believing in me.

To Tosin, you'll live on in my heart.

And to Jim, thank you for everything.....

CONTENTS

TABLES

FIGURES

GLOSSARY OF TERMS

GOL	Government Office for London
GLA	Greater London Authority's
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
ODPM	Office of the Deputy Prime Minister
CPRE	Campaign to Protect Rural England
LUCS	Land Use Change Statistics
NLUD	National Land Use Data
SUBR:IM	Sustainable Urban Brownfield Regeneration :Integrated Management'
LDA	London Development Agency
NHPAU	National Housing and Planning Advice Unit

CHAPTER 1
INTRODUCTION

1.1. HOUSING PROVISION IN LONDON

There have been a number of issues that have adversely affected the delivery of new housing in London. To identify what the issues are, this chapter will give a brief background of housing delivery in the UK, who supplies it as well as the determinants for the volume and type of housing being supplied, then show evidence of the problems via indicators in the housing market based on existing data on housing statistics in UK. Subsequently, the current sustainable solution to housing shortfall via Brownfield regeneration will be introduced, followed by an analysis of what PDLs are and its advantages for sustainable housing delivery.

1.1.1. HOUSING PROVISION BACKGROUND

Over a period of 25 years, the role of government in the provision of housing changed from provider to facilitator (Adams, 2003). Speculative house builders have thus contributed to filling the gap created in the housing provision and most recently affordable housing. Speculative housebuilders are now reported to be responsible for over 83% of all new homes built in the U.K. (Calcutt 2007), however there is much controversy over the reliance of the speculative house building sector for the provision of housing. This is because their actions are naturally driven by the need to ensure their business remains profitable. With such a high percentage of the industry provision given to speculative housebuilders in the housing sector, they are able to have Oligopolistic control over the housing market. Their self motivated actions is deemed to be a root cause of the lack of response of the housing market to the nature of demand and supply for housing in the economy, this point of view is shared by many.

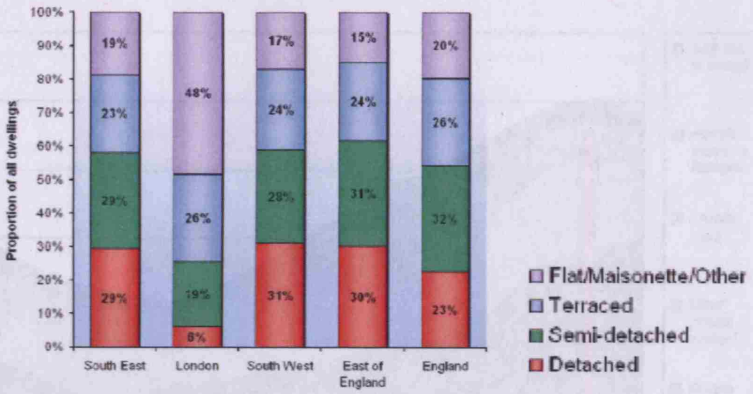
1.1.2. DEMOGRAPHICS & HOUSING PROVISION

Demographic and socio-economic characteristics are strong determinants of the volume and type of new housing produced by the industry. House builders in theory should base their volume and type of new housing on market needs, however they are often found to build to their own requirements. Current trend shows a growing population with an increasing number of people wishing to live by themselves; this has varied the rate of house building and increased the demand for housing in the UK. Evidence of this can be seen over the last fifty years in the U.K. where the rate of house building has varied. At its peak in the late 1960s and early 1970s over 400,000 houses were being built per year. This rate dropped steadily, so that by the 1990s the average annual rate was 190,000 houses per year (ESRSC, 2007). Despite a fall in the average size of a household - from 3.01 people in 1961 to 2.33 people in 2004, The Office of the Deputy Prime Minister (ODPM) reports that new houses are being built bigger with more bedrooms.

1.1.3. HOUSING TYPE AND SIZE

In the U.K., residential dwellings can be built in a variety of configurations. A basic division is between free-standing or detached dwellings and various types of attached dwellings. Detached dwellings vary greatly in scale and amount of accommodation provided. Similarly, attached or multi-unit housing also vary. The most common types of dwellings found in the U.K. are; i.Flats/Maissonette/Others, ii.Terrace houses, iii.Semi-Detached houses, iv.Detached houses *(DTZ Feb 2007)*. They comprise the total dwelling stock in the U.K., flats being the most common in London.

Fig. 1 **Dwelling Stock by Type**



(DTZ Consulting & Research February 2007)

1.1.4. HOUSING ISSUES

The demand and supply mechanism in the UK housing market is unbalanced resulting in a number of effects, i.e. unsustainable high prices, low supply of housing especially in key areas. The increasing shortfall in housing supply and the unsustainably high U.K. house prices reported a long term upward swing in 'real' house prices to the rate of 2.4% per annum in the last 30 years. The resultant effect was affordability whereby 46% of new households in U.K. were not able to afford to buy a property in the 1980's and only 37% being able to do so in the 2002 (Barker 2004).

It has become more difficult for households to buy property due to the ratio of their income/earning power to the real house prices. There is evidence of this and below are a couple of indicators are that show the state of peoples housing needs in England and specifically London:

I. The number of people in temporary accommodation in England had almost doubled between 1995 and 2003: from 46,000 to over 93,000 (Barker 2004).

Fig. 2 **Households in temporary accommodation in England.**

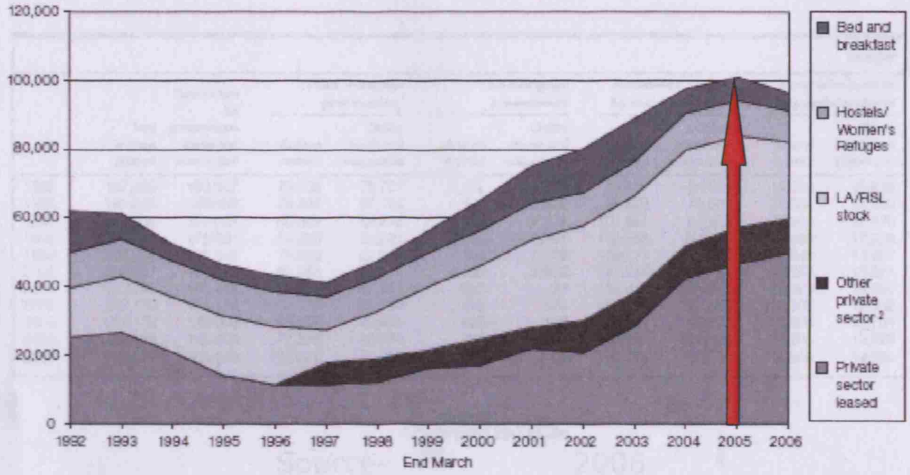
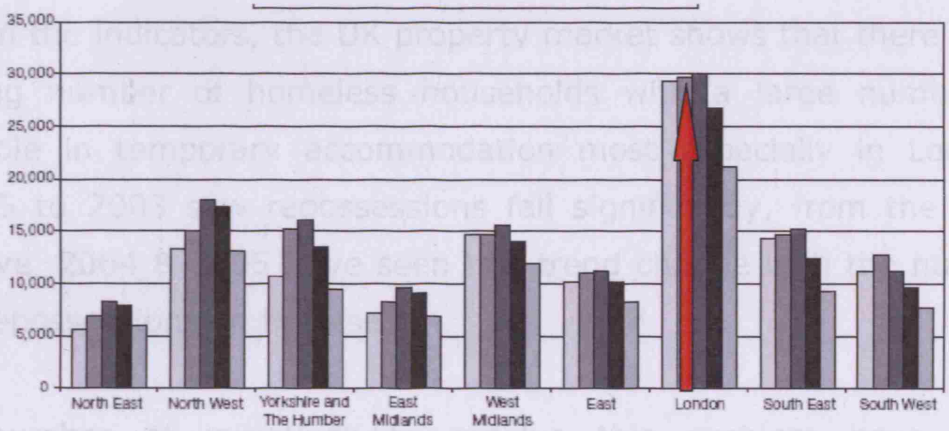


Fig. 3 **Homeless households in Priority need by region**



II. The number of re-possessions that have taken place over a period, this is also a good index in identifying periods of crash in the property market.

Table 1 **Number of outstanding mortgages, arrears &repossessions**

	Total number of mortgages at end of period	Mortgages 6-12 months in arrears at end of period		Mortages 12 months or more in arrears at end of period		Properties taken into possession during period [2]	
		Number	(%)	Number	(%)	Number	(%)
1995	10,521,000	126,670	1.20	85,200	0.81	49,410	0.47
1996	10,637,000	100,960	0.95	67,020	0.63	42,560	0.40
1997	10,738,000	73,830	0.69	45,200	0.42	32,770	0.31
1998	10,821,000	74,040	0.68	34,880	0.32	33,870	0.31
1999	10,982,000	57,120	0.52	29,520	0.27	29,990	0.27
2000	11,173,000	47,830	0.43	20,820	0.19	22,870	0.20
2001	11,247,000	43,140	0.38	19,720	0.18	18,280	0.16
2002	11,364,000	34,040	0.30	16,490	0.15	11,970	0.11
2003	11,452,000	29,200	0.25	12,680	0.11	7,830	0.07
2004	11,512,000	26,920	0.23	11,210	0.10	6,090	0.05
2005	11,591,000	32,470	0.28	13,820	0.12	10,250	0.09

Table 2 **Number Repossessions, Court actions for recovery of residential housing & land: UK**

Number

	Total actions entered	Total orders for possessions made and suspended	Other mortgage possessions[1]		LA mortgage possessions		Possession actions by social landlords[2]		Possession actions by private landlords	
			Actions entered	Orders made and suspended	Actions entered	Orders made and suspended	Actions entered	Orders made and suspended	Actions entered	Orders made and suspended
1995	187,165	160,397	79,068	70,703	5,102	4,555	83,637	66,961	19,358	15,618
1996	191,665	159,880	76,924	67,704	2,934	3,499	91,523	70,583	20,284	17,266
1997	197,236	157,025	65,002	54,778	2,071	2,378	107,861	82,493	22,302	17,376
1998	239,964	178,291	76,280	58,291	6,556	7,764	132,668	94,897	22,460	17,339
1999	239,066	171,518	73,240	52,895	8,368	7,299	139,117	96,357	18,341	14,967
2000	239,957	161,746	68,856	49,772	4,190	2,309	147,519	96,284	19,393	13,381
2001	243,356	165,418	66,462	47,751	986	78	155,419	105,098	20,489	12,491
2002	242,139	161,175	63,729	41,150	419	129	158,783	107,864	19,208	12,032
2003	227,178	149,003	66,396	40,468	633	194	141,681	96,620	18,468	11,701
2004	232,133	149,862	77,536	46,293	282	82	137,107	92,858	17,208	10,629
2005	260,026	168,809	115,072	70,751	280	93	126,306	85,931	18,368	12,034

Source- National Statistics 2006

The figures are based on the 13 largest building societies and as many as 19 of the largest non-building society members of the CML. Such lenders accounted for an estimated 85 per cent of total mortgage business. The figures have been grossed up to represent all CML members.
Includes those voluntarily surrendered.
Revisions have been made.

From the indicators, the UK property market shows that there are a rising number of homeless households with a large number of people in temporary accommodation most especially in London. 1995 to 2003 saw repossessions fall significantly, from the table above, 2004 & 2005 have seen this trend change with the number of repossessions on the rise.

A number of initiatives to resolve this problem have been introduced, the most recent being initiatives set up by the government in response to the barker review (2004). The concern over the increasing shortfall in housing supply was the basis for the Barker Review. Amongst others, the agenda was to assess the worrying undersupply of housing and the unsustainably high U.K. house prices (the review reported a long term upward swing in 'real' house prices to the rate of 2.4% per annum in the last 30 years). This had created problems of affordability. Subsequently housing policies focused on addressing three objectives:

- A greater choice of housing where the housing needs of all the communities would be recognised
- More sustainable patterns of development and
- Better use of previously developed land, with the focus on existing towns and cities.

The focus was to increase housing supply in relation to demand in key urban areas. This was one of the governments' solutions to undersupply and affordability. In 2002 the LUCS statistical release indicated that the Government's national target of producing 60% of new dwellings via development on previously developed sites and conversion of existing buildings would be exceeded to a figure of 70% in 2002/03.

Brownfields were the targeted areas for development; newer measures were set in place to increase densities on these sites. This did not come without its own complicated problems due to the nature of such sites.

1.2. PREVIOUSLY DEVELOPED LAND: BROWNFIELD

The U.K. Government's strong emphasis on sustainable development has resulted in revisions to planning policies: Planning Policy Statement (PPS) 1('delivering sustainable development') with the aim to strengthen the focus of sustainable development within the wider U.K. planning system. The guidance has been focused on promoting and facilitating an increased percentage of development taking place on Brownfield sites. Linked strongly to this is the emphasis on Brownfield regeneration. What therefore are Brownfields?

1.2.1. PDL DEFINITION

Previously Developed Land (PDL), commonly termed 'Brownfields' is defined in the Planning Policy Guidance 3 Housing as:

"....*that which is or was occupied by a permanent structure (excluding agriculture of forestry buildings), and associated fixed infrastructure.*"

The policy clearly delineates land which can be classified as Brownfield land, it excludes land and buildings that are currently in use for agricultural or forestry purposes, and land in built up areas which has not been developed previously i.e. parks recreation grounds and allotments. Land which holds listed, historical buildings and landmarks, which visually contributes to the natural environment is also excluded as brownfield land especially when it contributes substantially to nature conservation.

Campaign to Protect Rural England (CPRE) also defines 'Brownfield land' as 'land that is already developed, or has been developed sometime in the past.' in their Policy Position Statement (2006). In the CPRE definition of 'Brownfield land', there was the clear description of what the term encompassed: previously developed land and any buildings, usually empty, which lie on it i.e. a large amount comes from redundant industrial sites, institutions such as redundant hospitals, and also housing which has been or is going to be demolished. They are in agreement that parks, playing fields, allotments and public gardens are not brownfield land, as defined by the Government.

1.2.2. BENEFITS OF BROWNFIELD DEVELOPMENT

The Greenfield/Brownfield debate by general consensus favour the latter; this is mainly due to the sustainability ethos guiding social and environmental decisions being made in U.K. governance in

recent times. ODPM commissioned a research on sustainability impact (ODPM, 2005b), here the greenfield/brownfield availability and use is viewed as sensitive to location and density assumptions. From a viewpoint Brownfield regeneration could be seen as positive if only because it aids the sustainability agenda for environmental development. The table lists some economic, social and environmental benefits as published in 2003 from the National Round Table on Environment and the Economy.

Table 3 **Benefits of Brownfield Regeneration**

Economic	Social	Environmental
Creation and retention of employment pportunities	Improved quality of life in neighbourhoods	Reduced urban sprawl pressures on greenfield sites
Increased competitiveness for cities	Removal of threats to human health and safety	Restoration of environmental quality
Increased export potential for cleanup technologies	Access to affordable housing	Improved air quality and reduced greenhouse gas emissions
Increased tax base		

Source: National Round Table on Environment and the Economy (2003).

However unlike greenfield sites, the *'previously developed'* nature of brownfield sites ensure they come with remediation requirements, this makes the sites quite complicated to develop thus unattractive to housing developers.

1.2.3. CONSTRAINTS TO BROWNFIELD DEVELOPMENT

At the moment the current sustainability ethos within the U.K. promotes the development of new homes on brownfield sites, further still are the strides to ensure such developments achieve a targeted percentage of affordability. However brownfield land does come with a number of constraints. From a wide variety of literature on brownfield land, this report lists some of the constraints that affect brownfield development:

- Ownership Constraints of the land

Adams et al (2000) examined the nature and significance of ownership constraints within the urban re-development process. Their theory is derived from: *'The distinctiveness of land as a commodity'*, *'the imperfect nature of the land market'* and *'the behavioural characteristics of land owners'*. The paper demonstrates that ownership constraints to brownfield development may arise either because of deficiencies in or limitations to, the extent of ownership rights in potential development land as a result of strategies, interests, and actions of those who hold rights to land.

- Land Conditions.

Not all brownfield land is developable; those that are developable are not all suitable for housing. The location, classification and state (i.e. contamination) of brownfield land are the determining factors on the development of a site. The effect this has on the volume of brownfield land available for housebuilding was assessed by Dixon and Adams (2006).

1.2.4. CLASSIFICATION

The national land use database of previously developed land and buildings classifies PDLs into the following Categories:

Table 4 **Brownfield Land Classification**

Land Type	Description
A	Previously developed land now vacant
B	Vacant Buildings
C	Derelict Land and Buildings
D	Land or Buildings currently in use and allocated in the local plan and/or having planning permission
E	Land or buildings currently in use with re-development potential.

Land Use Change Statistics (LUCS) on the other hand classify land use into 10 groups and 24 categories. This is because they publish land use

at national, regional and county levels. Re-use of brownfield land is therefore dependent on the classification of PDL type.

1.2.5. ACTORS AND DRIVERS

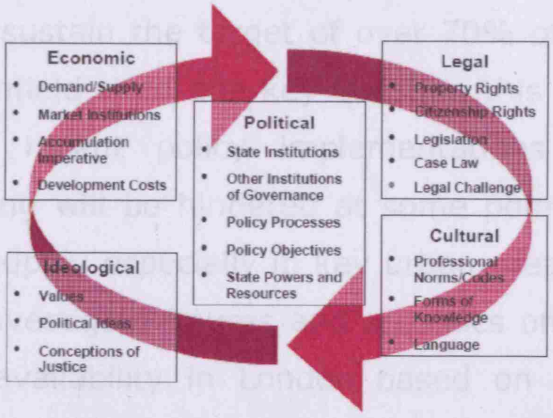
The actors involved in brownfield regeneration influence, constrain and facilitate each other in various ways. These actors are shown below:

Fig. 4 **The network of Actors around Brownfield Regeneration**

Source: SUBR:IM Conference Dixon and Doak, March 2005

They are influenced by wider 'driving forces' that provide an important (often determining) context for their actions. The diagram above illustrates a simplistic view of the main drivers that structure the action of actors. Below are the main driving forces that structure the brownfield regeneration process:

Fig. 5 **The Key Driving Forces**



Source: SUBRIM Conference: Dixon and Doak, March 2005

Figure 5 illustrates the drivers that structure the actions of stakeholders in the brownfield regeneration process. The context for their actions is dependent on the driving forces and their actions affect the economy as a result of the huge capital tied up in residential and non residential property in the U.K.

The actors and driving forces involved in brownfield regeneration influence constrain and facilitate each other ensuring the network of actors are frequently brought into contact via driving forces in the economic, legal, cultural, ideological and political framework of the society. Based on these forces the identified actors will be grouped into common stakeholders with something to lose or gain. This is because how effective brownfield regeneration has been in the bid to increase housing supply in a sustainable way can only be assessed from the viewpoint of the stakeholders. This is further discussed in chapter 5 of the report.

1.2.6. AVAILABILITY

The most up to date projections (Calcutt 2007) estimate that the house building industry would have to achieve a production of about 240,000 new homes a year to meet up to the demand for new homes. The most crucial area of perceived risk would be the availability of land that can sustain the projected rate of growth in the industry. To sustain the target of over 70% of new housing to be built on brownfield sites, the key question this report addresses is whether the recent policy implementations on sustainable delivery of housing will be hindered at some point by shortfalls in brownfield land supply especially in key urban areas. To asses this, this report will investigate figures and statistics on housing targets and brownfield availability in London based on borough specific statistics.

1.3. METHODOLOGY

The question sets a wide scope for research and analysis in order to assess how these issues have complicated the delivery of housing in London and wider UK. To arrive at an adequate conclusion therefore the report narrows down the scope within a time frame. This time frame is derived from the published delivery period for new housing in The London Plan (2004 to 2016).

This dissertation aims to assess the effectiveness of brownfield development as a sustainable solution to housing shortfall in London not only from projections and figures, but also from the impact the process has had on the stakeholders involved. The methodology employs a quantitative approach which measures the housing targets against Brownfield availability in London taking into consideration demographic changes and PDL replenishment rates. As well a qualitative approach which assesses some of the effects of brownfield development on the stakeholders involved.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The housing development market in the U.K. is mostly made up of speculative house builders and just over a decade ago they accounted for 75% of all new housing output in the U.K. (Barlow & Duncan 1994). Currently they produce over 83% of new housing (Calcutt 2007). Periods of boom in the economy ought to make their developments profitable thereby stimulating an increase in the supply of new homes, however rising prices of homes in the U.K. was found not to stimulate an increase in supply to meet demand.

Because the most influential sectors in the U.K. housing market are the development market and the land market; their activities control the timing and volume in the production of new housing in the U.K. property market. Developers bear the risks in fluctuations in house prices, being risk averse most developers tend to develop in less risky situations.

From the house price signals in the housing market, Ball (1998) analysed the effect of the activities of developers and land owners on house prices in the U.K. The resultant effect of their activities led to house prices becoming 'unresponsive' to economic indicators. Subsequently in a similar study, Meen (2003) determined from a collective study on the elasticity of housing supply that house prices remained unresponsive to economic indicators in the U.K.

As indicators a number of statistics can be used to depict the situation; Evidence of unsustainable high prices, low supply of housing especially in key areas can be seen from the slow growth rate of home ownership which was 70% in 2004 and will be 72% in

2016 (UK Governments Actuary Department). A second indicator is the increase in the number of the homeless, the number of people in temporary accommodation in England had almost doubled between 1995 and 2003: from 46,000 to over 93,000 (Barker 2004). Deduced from these indicators amongst others, households are finding it more difficult to buy property due to the ratio of their income/earning power to the real house prices.

The indicators show that the demand and supply mechanism in the housing market appears to be unbalanced. Regulatory authorities (both Government & Local) and interest groups have identified the issues that have arisen as a result of this (especially in key urban areas). It has had a higher impact on specific locations and other aspects of the society, these were identified by Barker (2007) as: lower paid key workers not being able to live near their work, people being priced out of their local area as well as a lack of key skills where they are required.On a wider scale, the continued lack of supply in relation to demand for housing will continue to cause macro-economic issues of instability in the UK Government has worked extensively to improve the housing situation over the years and their first step was to identify the constraints on housing supply based on the dynamics of housing supply and the impact of demography on the provision of new homes. It has led to a lot of government driven initiatives over the years to address the issues.

2.2. REASONS FOR HOUSING UNDERSUPPLY

The Barker Review's in depth study into the undersupply of housing revealed the reasons for the housing shortage: Land availability (and the restrictions on buildable land), Oligopolistic control in the housing market (by land owning developers). The slow planning process as well as reluctance by planning authorities to grant planning permission for buildable land was the reason for the

former, the latter was as a result of house builders operating an oligopoly through their hold on the supply of land i.e. 'land banks'. The general consensus is that a typical house building firm probably has '8' times the amount of land it requires for its yearly output in its possession. Their ability to own land banks allows them to have a heavy influence in the land market within the housing market. House builders with extensive land banks find it in their interest to hold back extensive amounts of buildable land in their possession from development to slow down the rate of supply thereby creating a demand that will keep profits up. The justification for holding back buildable land is their expectation of house prices increasing in the future, and to discourage new entrants into the development market. The resultant effect is an inadequate amount of buildable land available for development in key urban areas.

The economic implications required that these issues be resolved especially in key urban areas such as London because these areas were found to be the hot spots where the problems had the most impact on the society, the environment and the economy. Subsequently housing policies focused on addressing three objectives: A greater choice of housing where with the housing needs of all the communities would be recognised, more sustainable patterns of development and better use of previously developed land, with the focus on existing towns and cities (PPG3: *Housing* - ODPM, 2000).

2.3. BROWNFIELD DEVELOPMENT AS A SOLUTION

Previously developed lands (Brownfields) were the targeted areas for development, newer measures were set in place to increase densities on these sites. This did not come without its own intricacies due to the nature of these sites. The pro's and con's of developing on previously developed land has evolved a whole area

of research in itself. However the grand scheme was to increase housing supply in relation to demand in key urban areas. This was achieved when in 2002 when the Land Use Change Statistics (LUCS) release indicated that the Government's national target of producing 60% of new dwellings via development on Previously Developed Land (PDL) & conversion of existing buildings would be exceeded to a figure of 71% in 2002/03. However, from housing statistics, there is a paradox between the increase in supply of new homes and a decline in the number of home owners. There were various reasons for this affordability being the most notable.

The prevention of urban sprawl and keeping U.K. cities compact can be seen as the main driver for Brownfield redevelopment in London. Policy and planning guidance in England supports the drive for sustainable development agendas in the housing sector, PPG3: *Housing* (ODPM, 2000) states the commitment of Government in promoting more sustainable patterns of development by making efficient use of land. Prevention of urban sprawl could therefore be achieved by maximizing the use of previously developed land which includes the conversion and re-use of existing and structurally sound buildings into housing. This has come with its advantages and disadvantages.

The benefits of *Brownfield Regeneration* can be seen to reflect in economic, social and environmental contexts. The economics of developing (affordable) housing is dependent on a number of variables; development land is a key variable. In the economics of development the cost of land in most cases is determined from a number of factors, the amount the land owner is willing to sell; the residual value left over from the developers projected cost of development and how much the sale or rent of the property would realise; and the average or going rate for land in that area. The

decision to develop affordable housing on specific sites is part dependent on the cost implications of the sites being developed on. The 'previously developed' nature of a site increases overall development costs substantially because brownfields require remediation before they can be developed. Even though this can be negated by building up to the maximum density allowed for the specific borough it still leaves the choice of building on Brownfields and not Greenfields unfavourable for most developers. However, 'The Calcutt Review' (2007), expressed that though brownfield land values are low, there is great potential for recovery in value over a period of time with an increase capital growth on the development dependent of the business model being practised by the housebuilding firm/company. Economic consequences are not limited to the house builder and land alone, but spread across to other stakeholders i.e. owner occupiers and rental occupiers.

The Calcutt Review (2007) points out the social consequences that may occur if developers do not match the social characteristics of local people living around new developments because people prefer to live in areas where the other residents share similar values to themselves i.e. social status, income level, single family status& age. Matching and improving this is therefore crucial to achieving a successful development especially where the aim is urban regeneration. Socio-economically however, proximity to social housing could adversely affect house values, but the introduction of a percentage of affordable housing in new developments under the Section 106 agreements has tempered the acceptance of social and affordable housing and somewhat limits the adverse effect of the mix on house values.

There would be environmental consequences if housing delivery were to achieve the targeted volume of housing delivery on green

sites. The sustainable way is to encourage brownfield development as an alternative to developing on Greenfield sites.

"The regeneration of Brownfield sites for housing and other uses has therefore been portrayed as key elements in sustainable development agendas in the U.K....."

Dixon and Adams, 2006

This opinion has been cited in various arguments, the 2004 Barker Review is of the same opinion. However the risks, both market and site specific for developing on brownfields were also highlighted as a cautionary measure.

Considering the current drive to produce over 70% of new housing on brownfield land, understanding the 'stock and flow nature' of brownfield sites is quite important. Doak and Karadimitrou, 2007 attribute Brownfield regeneration as a complex process involving many actors. Disseminating the process will help to measure the supply of brownfields available; subsequently sub dividing them into those available for housing and those that will be determined to be suitable for housing. These statistics are necessary in order to project the volume of housing that can be produced in a period of time. The percentage which will be 'affordable housing' is also dependent on the ratio specified per borough.

2.1. THE PARADIGM SHIFT TO HOUSING AFFORDABILITY

In assessing how effective the efforts to increase housing supply has been so far, this report encountered a paradigm shift from the supply of housing to affordability of housing. For the most part, affordable housing is delivered through cross subsidy by way of agreements with landowners/developers, supported by Local Planning Authorities and Government circulars. It is also delivered

in a variety of forms: Social rented, Owner occupier (including shared ownership) e.t.c.

As at 2001, most London Boroughs sought to achieve a target of 25% affordable housing through planning (*'Affordable Housing in London'*: Spatial Development Strategy 2001). The Mayor's Housing Commission in November 2000 proposed more new housing be designated to as affordable housing suggesting a London wide target of 50%, 35% for social renting (*households on low incomes*) and 15% for intermediate housing (*households on moderate incomes*). The target fluctuates in different boroughs, this because the criterion for determining the volume of affordable housing per new development is dependent on a number of factors, these factors differ per borough.

In 2001, the Greater London Authority's (GLA) technical report (1): *'Affordable Housing in London'* was based on the need to estimate how much affordable housing might be developed in the future in light of viability and capacity information. An important output of the study was a Model that estimated the financial viability of affordable housing delivery in each of the 33 London Boroughs. The model is used to demonstrate the impact on financial viability of including varying proportions of affordable housing in specimen developments. Of importance however is the ability to assess changes in market circumstances and determine policy variables per borough from the model.

2.5. HOUSING TARGETS

Current estimates suggest that around 200,000 new private sector households are forming each year as household projections continue to rise. This is attributed to lower mortality rate, more single person households and international migration. Based on

government actuary's department, past trends show a projected need for new dwellings at about 225,000 – 230,000 a year with an average shortfall of 56,000 dwellings per annum (Barker Review). The shortfall figures became cumulative as shown in The South East Regional Assembly's assessment of backlog in U.K. housing supply, this totalled 29,000 households. To meet up to this, government subsequently set a target of 200,000 additional homes per year by 2016. Statistics showed that it was about 40,000 more than was being built. To address this, Government researched & published that housing projections would require the house building process to meet the production of homes for about 209,000 new households every year.

This target has been superseding by government recently, the Calcutt Review (2007) also estimated that the house building industry would have to achieve a production of about 240,000 new homes a year to meet up to the demand for new homes and estimates the house building industry would have to grow at a rate of 4.75%, compounded over the next nine years. The review found this rate over-optimistic but achievable from historical precedence. However it would have to be achieved 'overwhelmingly' from the private sector due to their accessibility to investment capital. The risk however would be great especially coming from a speculative house building sector that operates pre-dominantly on a 'Building for Sale Model'. The most crucial area of perceived risk would be the availability of land that can sustain the projected rate of growth in the industry.

2.6. BROWNFIELD AVAILABILITY & EFFECTIVENESS

In light of the recent policies that encourage and require over 70% of new housing to be built on brownfields, the key question therefore is whether the recent policy implementations on

sustainable delivery of housing in London will be hindered by shortfalls in land supply, and will it negatively affect the delivery of housing in key boroughs. Dixon and Adams (2007) stress the importance of keeping track of the 'stock and flow' nature brownfield regeneration.

However measuring the effectiveness of brownfield development in London should not be limited to counting the number of new homes that are and have been built, but should also be assessed from the collective viewpoint of the stakeholders involved. Identifying the stakeholders would entail assessing the large number of actors in the brownfield regeneration process and respectively grouping them to include *the people who live within London*, *the House builders who build the houses* and *the Regulatory authorities working towards achieving the housing target for London* in relevant groups.

CHAPTER 3

POPULATION, DEMOGRAPHICS & HOUSING TARGETS

3.1 INTRODUCTION

The Spatial Development Strategy in the Mayor's London Plan (Feb 2004), sets out spatial policies for housing development and estimates the minimum target of homes that should be produced per annum. This target is set from data on population and household estimates. This chapter will assess the interrelationship between population, households and housing targets, and how they impact on London's housing needs and supply. A benchmarking exercise will compare housing targets to household projections and population projections for London. This exercise is simply used to confirm whether the housing target set for London will be adequate for the housing needs (number & type) derived from demographic projections.

3.1.1. POPULATION TO HOUSEHOLD PROJECTION

Before housing targets are set, the regulatory authorities research and compile population data to assess the regions and specifically boroughs that have the largest population, from this information, the regions and boroughs that would need the largest volume of housing are identified. Table 5 in Appendix 1 shows the current population estimates for London per borough. This report was able to identify that the boroughs that would require housing the most were located within the East of London, followed closely those in Central London. This assessment is based on population estimates only. See table 6 for summary.

Table 5 **Population Projection per Region: Greater London**

Boroughs	All ages	Children	Working age	Older people
	Mid-2006	0-15	16-64M/59F	from 65M/60F
CENTRAL	1,643.10	264.1	1,188.90	190.1
EAST	1,766.50	633.3	1,192.10	422.7
WEST	1,432.40	271.4	959.4	201.5
NORTH	1061.3	216.6	694.3	150.5
SOUTH	1,353.60	265	873.1	215.4
GREATER LONDON	**8689.3**	**1666.1**	**5816.7**	**1206.4**

The population forecast is a combination of the output for Greater London, Inner London and Outer London. An annual monitor on population figures is carried out and published by GLA, this information/data helps to mitigate the difference and impact that unforeseen population changes may have on the physical, social and political environment.

Population projection and change is re-addressed as household projections in order to determine the volume and type of homes to be built per borough. This is because household projections and not solely population as a criterion is used to estimate housing requirements for boroughs in all regions within London and U.K in general. The GLA released a technical report in 2002; it estimated the population and household Forecasts from 2001 to 2016. Table 7 shows the estimated household projection as published by the report.

Table 6 **Benchmarked Household per Region: Greater London**

Year	2001	2016	2001-2016
Household by type.	**Figures in thousands**		
Married Couple Household	1074.1	916.6	-157.5
Cohabiting Couple Household	345	531.5	186.5
Lone Parent Households	263.2	311.1	47.9
Other Multi-person Households	379	559.2	180.2
One Person Households	1048.3	1102.5	54.2
Total Households	**3109.7**	**3421**	**311.3**

Source: GLA (May 2002)

The result is a forecast of 311 thousand households over the fifteen years (2001-2016), that is an average growth of 20.7 thousand per year.

Household projections such as the one shown in table 7 are used to measure the changes in household type over the years from demographic changes. See table 7 in Appendix 1 shows how those changes would occur in detail per borough from 2002 to 2016.

The largest changes in population and demographic patterns are forecasted to be in Tower Hamlets and Lambeth, both over one thousand per year, together with Barnet, Croydon, Greenwich, Haringey and Southwark at around 900 per year. The impact of these additional households will contribute to the demand for additional homes. Apart from estimating the boroughs housing needs, such data ensures the right type and size of houses will be built and equips the authorities to develop strategies for housing provision London wide. From the table above, 31,130 housing units of varying types and sizes would need to be provided annually from 2002 till 2016. Predictably, the east of London that was found to have the largest population also has the largest household estimate, see table 9 below:

Table 7 **Population & Household Projection per Region: G.London**

Boroughs	Population (thousands)		Original Households		Benchmarked Households		Change	Annual Change
	2001	2016	2001	2016	2001	2016	2001-2016	2001-2016
CENTRAL	1566.1	1725.8	723.7	829.9	720.5	794.5	74	4.9
EAST	**1994.7**	**2220.2**	**817.9**	**951.7**	**810**	**901.5**	**91.5**	**6.1**
WEST	1020.6	1542.1	577.7	656.7	575.9	625.3	49.3	3.3
NORTH	1065.4	1175.1	436.1	503.3	435.1	480.5	45.3	3
SOUTH	1363.9	1485.9	569.5	650.5	568.1	619.2	51.1	3.4
G. LONDON	**7410.8**	**8149.1**	**3124.8**	**3592.1**	**3109.7**	**3421**	**311.3**	**10.7**

The London Plan published an initial figure of 23,000 homes per annum in 2004; currently this figure has risen to 30,500 homes per

year in 'The London Plan's Spatial Development Strategy (2006 revision)' based on reviewed population projection of 8.149 million by 2016. The annual change in population projected in 2002 was 10.7% and predicted an estimated population of 8,149,000. Housing targets were set from this estimate as shown in the table above. The actual population estimate for London published in 2007 for mid 2006 was 8,689,300; this had already exceeded the estimated people by 2016 population projection that the both revisions of the London Plan were based on therefore the table above would have to be updated to arrive at a current demographic figure and housing target.

3.1.2. LONDON'S HOUSING TARGET

Greater London is made up of 33 different Boroughs spread out over inner and outer London. Thirteen of these boroughs make up 'Inner London' with 10 out of them found within Central London alone. Others are spread over north, south, east and west of London. The published 2004 London plan anticipated an additional 22,400 homes per annum between 2001 and 2016; this figure is spread over the 33 boroughs. In 2006 alterations were made to this figure and published as an amendment to the 2004 London Plan publication (Spatial Development Strategy for Greater London, 2006), it raised the Policy 3A.1 target to 30,500 additional homes per annum, and this figure is also divided amongst the 33 boroughs. Appendix 3 table compares the difference between how the new housing development target was divided amongst the boroughs then summarises per region in the original plan in 2004 and the amendment published in 2006.

The East of London was identified to have the largest population and household estimates in table 10, in line with this, the housing

target is significantly larger than that set for other regions, see summary in table 8 below:

Table 8 **Housing Target per Region: Greater London**

2004	1997-2016	annual	2006	2007/8-2016/17	annual
Central	10,800	540	Central	62,600	6,260
East	142290	7140	East	137,950	13,795
West	59,440	2,970	West	36,950	3,695
North	59,470	2,980	North	37,950	3,795
South	56,550	2,830	South	29,550	2,955
Greater London	457,950	23,000	Greater London	305,000	30,500

Sources: The London Plan 2004 (04 data)
The London Plan's Spatial Development Strategy 2006 Amendment (06 data)

This exercise observed that there is a difference between the demographic estimate of household number and housing target for London (**31,150 – 30,500**), however it is important to note that the accuracy of the housing target is not the crucial point; this is because other factors are taken into consideration when housing targets are being set by the government, factors such as empty & abandoned units, change of use of old warehouses/office blocks. The importance of getting it right is to be as close to demographic estimates as possible. From precedence, Britain has never provided enough housing; the important thing is to note the excellent rate of improvement in how Britain has tackled the issues from housing shortfall in a way that provides better standards and quality of housing and improved communities.

In summary, the above tables show the amendments made to the housing target in 2004 and 2006, the 2004 figures were based on earlier population statistics which had been updated. This required an amendment to be made to the original London plan's spatial

development strategy in order to keep up with the population and household increase.

The London Plan initially sought to ensure the provision of at least an additional 457,950 homes in London between 1997– 2016, equivalent to 23,000 per year; the Mayor proposed that this target should be increased after the London Housing Capacity Study in 2005 to 310,900 for the rest of the period. The alteration target (30,500 per annum) was thus derived from the London Housing Capacity Study (2005) and the most recent population and household projection for London (GLA Population and Household Forecasts: 2001-16). This was subsequently published as the 2006 amendment to the housing target set for London in the Mayor's Spatial Development Strategy. It is the first of a periodic review to ensure that housing needs are being met in all boroughs in London, this helps to meet up to the housing shortages that arise as a result of unforeseen changes in population and demographics. The estimates made on population and household projection indicated the types and sizes of housing units needed londonwide.

There are other variables that are strong determinants of how much housing can actually be produced i.e. Land availability, Planning system, current policies e.t.c. The former: land availability plays a major role. The current policy on housing provision drives the market to build over 70% of new housing on previously developed land. It is quite important to ensure that there will be enough land to achieve this.

3.2. PDL AVAILABILITY AND HOUSING TARGETS: LONDON

In the bid to support and adhere to the sustainability ethos in the urban and built environment, previously developed lands

(Brownfields) have become the target sites for new housing development. To help increase housing supply in relation to demand in key urban areas, planning authorities have set measures to increase densities on brownfield sites and to speed up the planning process. Statistical Data release indicated that the initial Government's national target of producing 60% of new dwellings via development on brownfield development and conversion of existing buildings was exceeded to a figure of 71% in 2002/03. Currently, the figure is on the rise. This will have an impact on PDL supply & its availability. This chapter discusses the factors that influence and facilitate the availability of PDL, then uses this to estimate the volume of PDL available in London for housing development

3.2.1. PDL AVAILABILITY

Previously developed land is recorded to ensure its availability and replenishment rate. There are two sources of land use data which routinely collect and collate information on distribution of brownfield land and brownfield re-development; Land Use Change Statistics (LUCS) and National Land Use Development-Previously Developed Land (NLUD-PDL):

LUCS: LUCS are used to produce statistics such as the percentage of dwellings built on PDL and the amount of development within Green Belt areas, so that the effectiveness of government policies can be monitored. They are also used in formulating and monitoring a national target for the percentage of housing that should be built on reused sites and in projecting urban growth.

NLUD-PDL: It is based on the collection and recording of site specific data by Local Authorities returned to the ODPM on an annual basis. These data sources provide the basis for evaluating and monitoring brownfield policy and targets.

There been a number of national data collection exercises over the years based on this data specification. However, none of these data sets is complete. In 1998 95% of local authorities completed a return falling to 63% in 2001 and rising again to 80% in 2002 and 84% in 2003.

National Land Use Database (NLUD) disaggregates brownfield land into the following categories:

- Vacant and derelict land (comprising previously developed vacant land, derelict land and buildings and vacant buildings).
- Land currently in use (allocated in a local plan or with planning permission for any use and known redevelopment potential but no planning allocation or permission).

Based on this classification, the total brownfield stock (suitable for housing) in London as at 2004 was 132,100, of this figure; the total brownfield stock with permission/potential (suitable for housing) was 95,335.

3.2.2. PDL DEVELOPABILITY

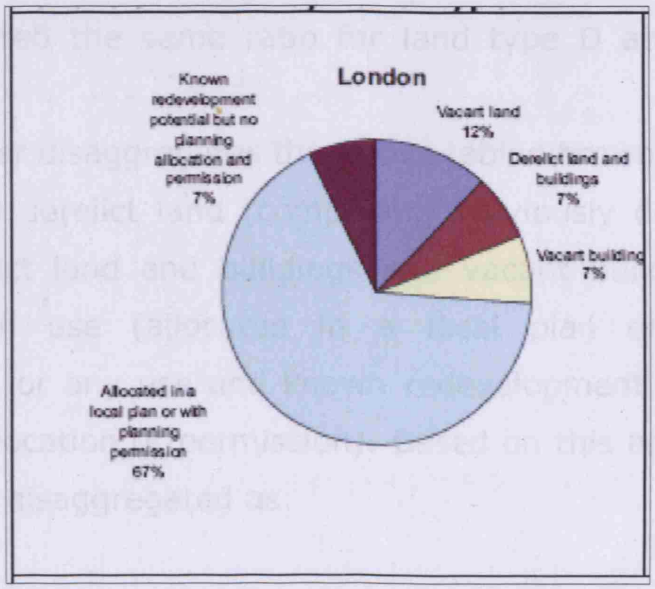
The National Land Use Database of Previously Developed Land reported that in 2005, London had a total of 3,080 hectares of PDL that is unused or may be available for development. This forms 2.4% of the 63,490 hectares available in the whole of England (London Development Agency (LDA): London Brownfield Land Review, Jan 2007). The true picture of the availability of brownfield should reflect PDL that is available and suitable for development i.e. *developability*. The developability of PDLs is dependent on a number of factors; these factors reduce the lump amount recorded down to those that are suitable for development. The developability criteria of PDLs range from:

- Type of PDL i.e. classification

- The stock and flow process of brownfield sites which differ in localities
- The regeneration rate of new brownfield sites
- Location of the land (residential, commercial or industrial areas)
- The ability to achieve planning permission for development
- Level of site contamination and amount of remediation required
- Flood Risk

PDLs are generally characterised by land type (NLUD), their percentage in the overall number available is shown in the pie chart (Fig. 6)

Fig. 6 **PDL by Land Type.**



Source: NLUD (2005)

Table 12 subsequently converts the percentages in figure 6 above into hectares from the published overall number of hectares of PDL available in London for the same year (2005): 3,030 ha.

Table 9 **Conversion of Percentage to Area of available PDL in London**

Land Type	Description	%	Hectares
A	Previously developed land now vacant	12%	369.6
B	Vacant Buildings	7%	215.6
C	Derelict Land and Buildings	7%	215.6
D	Land or Buildings currently in use and allocated in the local plan and/or having planning permission	67%	2063.6
E	Land or buildings currently in use with re-development potential.	7%	215.6
	Total Hectares of Land		3,080 ha

The land type with immediate developability is '***D***' which is 67% of the total stock recorded and roughly translates to a figure of 2063.6 ha for 2005. This is about two thirds of the total PDLs in London, to benchmark this ratio, the LDA London Brownfields Land Review in 2007 reported the same ratio for land type D above (pg11 LDA' 2007).

NLUD further disaggregates the above tabled brownfield land into 2: Vacant and derelict land (comprising previously developed vacant land, derelict land and buildings and vacant buildings) and Land currently in use (allocated in a local plan or with planning permission for any use and known redevelopment potential but no planning allocation or permission). Based on this brownfield sites in London are disaggregated as:

Table 10 **Disaggregated Brownfield Sites in London: Type and Area**

Description	Land type	%	ha
Vacant and derelict land (comprising previously developed vacant land, derelict land and buildings and vacant buildings):	A, B & C	26%	800.8
Land currently in use (allocated in a local plan or with planning permission for any use and known redevelopment potential but no planning allocation or permission).	D & E	74%	2279.2

Statistics from the NLUD indicates a figure of 2063.6 ha for 2005, the ODPM calculated the replenishment rate of total stock to be 8% of total stock per annum, and this gives an estimated replenishment of brownfield stock around 246.4 ha per annum.
NLUD 2005 identified a total of 1245 PDL sites in London that may be available for development, this figure can be easily confused with the total number of hectares available, this can be simplified by assuming the total size of the 1245 sites equate to around 2279.2 ha as shown in table 13.

Of the 1245 PDL sites 345 were located in areas of flood risk. These sites in flood risk areas have a total area of 831 ha which is around one third of the total PDL area for the whole region (NLUD 2005). The distribution of these sites can be seen in the table below:

Table 11 **Brownfield sites in Flood risk Areas: Greater London**

Sub-region	Area (ha)	% of area	No of sites	% of Sites
Central	84.9	10%	110	32%
East	481.7	58%	128	37%
North	77.1	9%	35	10%
South	82.4	10%	37	11%
West	104.9	13%	35	10%
Greater London	830.9	100%	345	100%

Source: LDA Brownfield Land Review 2007

In summary the brownfield sites available for development in London can be estimated to reduce from 2279.2 to 1448.3 hectares and 1245 to 900 sites due to their location in flood risk areas. At a replenishment rate of 8%, the current figure should be about 1,680 ha and 1044 sites (2007).

Table 12 **Projected area and number of PDL's in London 2005-2007**

NLUD Data date	ha	No of sites
London 2005	1448.3	900
8% replenishment rate		
London 2007	1,680	1044

The current NLUD data records 1,850 ha as suitable for housing, the implications are that the replenishment seems to have occurred at a rate higher than the 8% estimated by the OPDM. The Brownfield Land Review (2007) recorded that of the total available brownfield land in London, 51% are allocated for mixed use schemes, 11% allocated to pure housing and 15% to employment. Therefore the total 1,850 hectares is made up of the 51% available for mixed use schemes and the 11% for pure housing. The left over land amounts to 38% of the developable PDLs in London, the 15% for employment can be found within this, thus leaving 23% for other uses.

3.2.3. PDL AVAILABILITY FOR LONDON'S HOUSING TARGET

1,850 hectares of PDL has a capacity for 125,300 homes at a density of 68 dwellings per hectare. This is very high because London is a highly dense and growing city and as such was allocated an average development density of 68 dwellings per hectare (Rest of England: 35 dwellings per ha).

To achieve the annual provision of 30,500 dwellings at a rate of 68 dwellings per hectare, London's area of developable land can cater for 13,838 dwellings as per annum for pure housing, leaving a total of 16,662 dwellings per annum to be built within all the mixed use schemes in Greater London.

1,850 hectares of the developable PDLs in London are allocated for housing; this number of PDLs will have a capacity for 125,300 homes. With an annual estimated housing target of 30,500, and current policy and guidance requiring over 70% of this to be built on PDLs, a minimum of 21,350 dwellings should be built on PDLs annually. Even at a replenishment rate of 8%, the area of brownfield land available can accommodate 21,350 dwellings annually from 2007 to 2013 only. In all likelihood, London could run out of developable PDLs for housing within the next 5 years and this would result in London falling short of the housing supply target from 2014 to 2016.

In summary this chapter found that the alterations to the 2004 London Plan's 'Spatial Development Strategy' in 2006 increased the targeted number of new homes to be built per annum till 2016. Building over 70% on them on PDLs may not be achievable at the present rate of replenishment. New sources of supply need to be investigated for additional capacity. Government policies on housing has encouraged and facilitated the increase in housing supply to meet up to demand since the Barker Review was published in 2004. The process has been successful in many areas but as with all strategic plans to solve problems, other issues have come up along the way e.g. affordability, PDL availability, PDL remediation, PDL Land Value e.t.c.

The aim however was to address the shortage of housing supply, simply put there has been a measure of success towards that. However measuring how effective it has been so far should not be limited to counting the number of new homes that are and have been built but should also be assessed from the collective viewpoint of the stakeholders in the brownfield redevelopment process. Identifying the stakeholders would entail assessing the large

number of actors in the brownfield regeneration process, it would therefore be simpler to categorise them into smaller groups. Groups that would collectively include the people who live within London, the House builders who build the houses and the Regulatory authorities working towards achieving the housing target for London.

CHAPTER 4

IDENTIFYING THE STAKEHOLDERS

4.1. INTRODUCTION

The natural next step for research would be to further break down the identified actors from the Dixon and Doak study of the brownfield regeneration process. Carrying out this exercise would require research work beyond the scope of this dissertation; this chapter will distribute the identified actors into 3 generic groups of stakeholders; house builders/developers, regulatory authorities and investors. This is means for this report to assess the effects of brownfield regeneration on the stakeholders involved in the brownfield regeneration process.

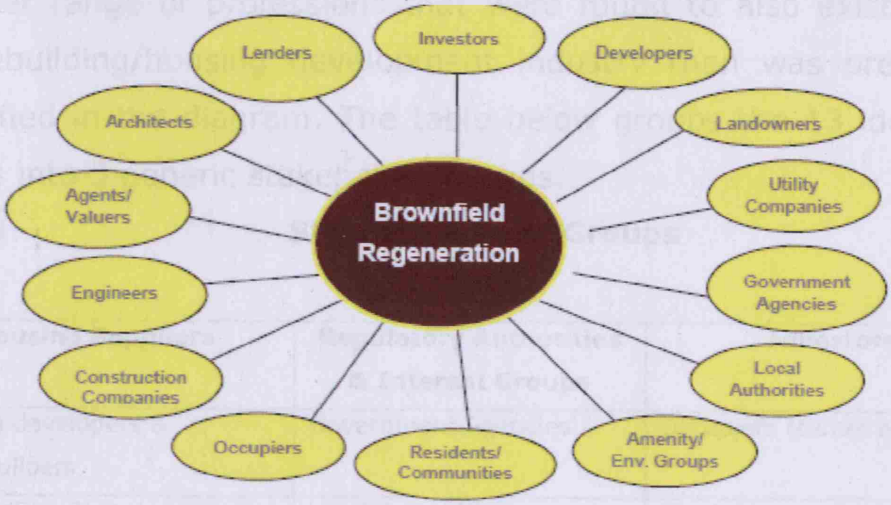
Fig. 7 **Brownfield Stakeholder Groups**

4.2. ACTORS TO STAKEHOLDERS

The actors and driving forces involved in brownfield regeneration influence constrain and facilitate each other. These network of actors are frequently brought into contact via driving forces in the economic, legal, cultural, ideological and political framework of the society. Although Dixon & Doak (2005) acknowledge the lead-work on the analysis of actors and drivers to the social scientists working for SUBRIM, they acknowledge that other forms of research are

needed to generate knowledge that can be used and deployed to realise objectives and interests, construct strategies and (re)structure the regeneration process along existing lines or in new innovative ways. This will pave the way for awareness of the diverse range of actors and driving forces which will help us fully understand the 'real world' issues Brownfield development engages in. The actors involved in brownfield regeneration that influence, constrain and facilitate each other in various ways, they are identified in figure 8 below:

Fig 8 **The Network of Actors: Brownfield Regeneration**



Source: SUB:IM Conference: Dixon and Doak, March 2005

Simply listed they are:

1. Investors
2. Developers
3. Landowners
4. Utility Companies
5. Government Agencies
6. Local Authorities
7. Amenity/Environmental Groups
8. Residents/Communities

9. Occupiers
10. Construction Companies
11. Construction Professionals and Tradesmen (including engineers & architects)
12. Agents & Valuers
13. Lenders

While assessing the role of the actors in the brownfield regeneration process, it was identified that the role of Engineers & Architects would be better suited under a generic actor sub-group which consists of construction professionals and tradesmen, this allows for a wider range of professions that were found to also exist in the housebuilding/housing development industry than was previously identified in the diagram. The table below groups the 13 identified actors into 3 generic stakeholder groups.

Table 13 **Stakeholders by Groups**

Housing Suppliers	Regulatory Authorities & Interest Groups	Investors
Housing developers & Housebuilders	Government Agencies	Occupiers (owner & rental)
Construction Companies	Local Authorities	Capital Investors
Construction Professionals & Tradesmen	Amenity & Environmental Groups	Lenders
Utility Companies		Landowners
Agents & Valuers		Residents & Communities

4.2.1 Housing Suppliers

The housing supplier group consists of the actors who are involved in the physical production and supply of new housing. Out of the 13 actors identified by Dixon and Doak (2005), 5 of them were found to belong to this group based on their role in the brownfield regeneration process:

- Housing Developers & Housebuilders

- Construction Companies
- Construction Professionals & Tradesmen
- Utility Companies
- Agents & Valuers

4.2.2 Regulatory Authorities & Interest Groups

This group is made up of the regulatory authorities both government & privately run, as well as interest groups that represent the society's vested interest for ethical, environmental and sustainable delivery of new homes through the brownfield regeneration process:

- Government Agencies
- Local & Regional Authorities
- Amenity & Environmental Groups

4.2.3 Investors

The investor group is made up of stakeholders who invest their money housing in some form or the other. Their actions affect the economy as a result of the huge capital tied up in residential property in the U.K. They were identified as:

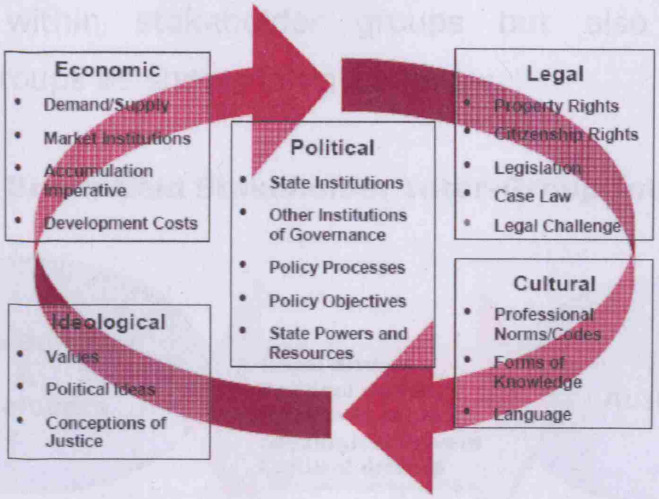
- Occupiers (owner & rental)
- Capital Investors
- Lenders
- Landowners
- Residents & Communities

4.3. STAKEHOLDERS RELATIONSHIPS

The actors in the brownfield regeneration process are identifiable because they come in contact with each other at some stage or the other during brownfield regeneration or development. Figure 9 below shows the driving forces that facilitate their interaction and

further identifies the specific areas where the driving forces facilitate the interaction of the actors in the brownfield regeneration process.

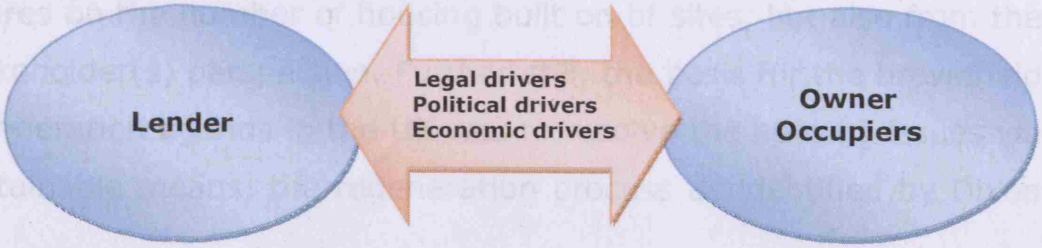
Fig. 9 **Key Driving Forces: Brownfield Regeneration**



Source: SUBIM Conference: Dixon and Doak, March 2005

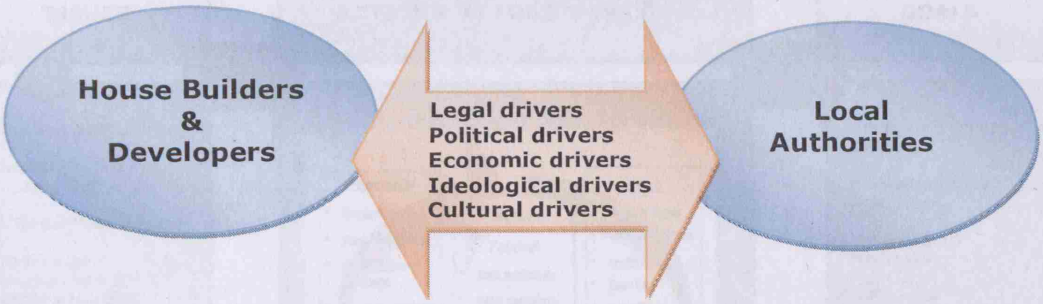
The driving forces feed the interaction amongst actors in the brownfield regeneration process; this is because they provide important (often determining) context for the actions of the actors as they structure the brownfield regeneration process. The actors in the stakeholder groups utilize at least one, a combination or all of the drivers to interrelate, function and act in the brownfield regeneration process. A typical scenario of how this can occur is shown in fig. 10. Lenders such as banks and building societies interact with individual investors via mortgage and home improvement lending, the requirements for this form of lending is regulated vial legal, economic and sometimes political groups and initiatives.

Fig 10 **Brownfield Stakeholder Intra-Group Interaction**



Section 4.1.1 grouped the actors found within the BF regeneration process into 3 generic stakeholders, the actors in fig 11 above are from the same stakeholder group. It is important to note however that the interaction amongst actors in the regeneration process is not limited within stakeholder groups but also cuts across stakeholder groups as shown in fig 11 below.

Fig 11 **Brownfield Stakeholder Inter-Group Interaction**

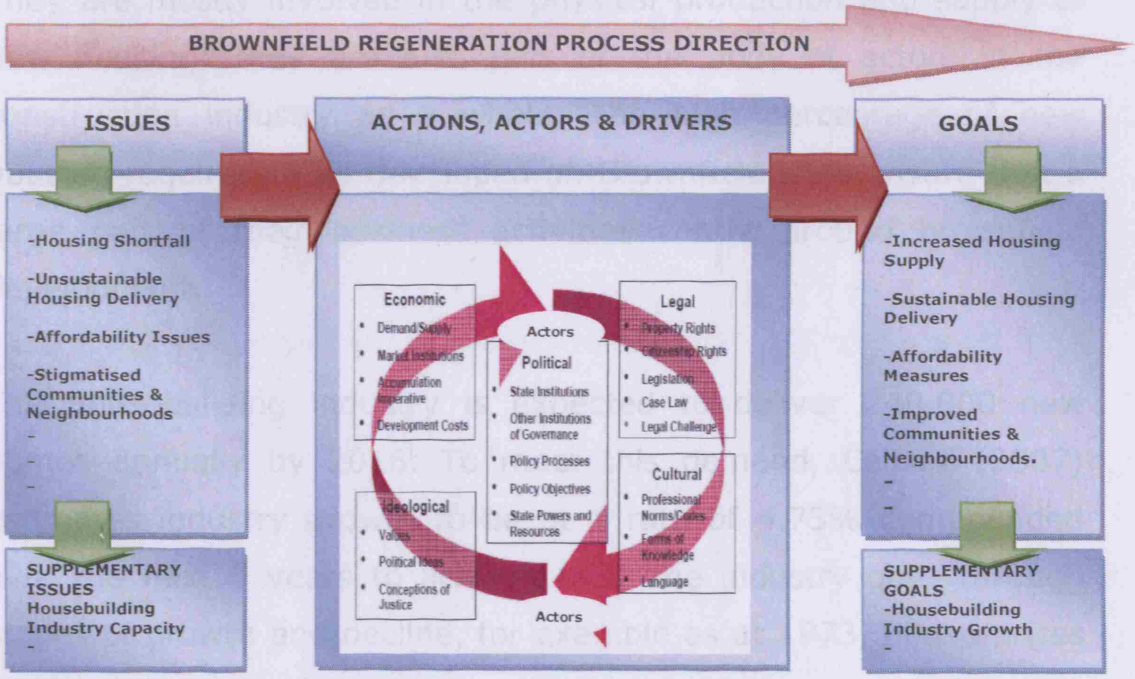


In summary, while addressing the issue of housing shortage, London has focused extensively on brownfield development more intensely than any other city in the UK; this chapter identified & grouped the wide range of actors in the regeneration process into 3 generic groups of stakeholders based on their roles and activities. It was found that these actors interact due to sole or multiples of 5 identified drivers.

From the wide range of actors identified in the brownfield regeneration process, 3 generic groups of stakeholders were identified based on their roles. This chapter will discuss some of the effects of brownfield development on them as a means to identify if the brownfield agenda has been effective, not just from facts and figures on the number of housing built on bf sites, but also from the stakeholder(s) perspective. Further still, the basis for the brownfield regeneration agenda in the UK was to resolve the housing issues via sustainable means, the regeneration process as identified by Dixon

& Doak (2005) should therefore be viewed in a wider context that shows the direction of the BF regeneration agenda, the identified issues & the goals the agenda should achieve.

Fig 12 **Process Direction: Brownfield Regeneration**



The regeneration process should therefore be shown as achieving set goals. Figure 12 above aims to capture this wider context of the regeneration process as well as the direction of the BF regeneration agenda.

CHAPTER 5

EFFECTS OF BF DEVELOPMENT ON STAKEHOLDER GROUPS

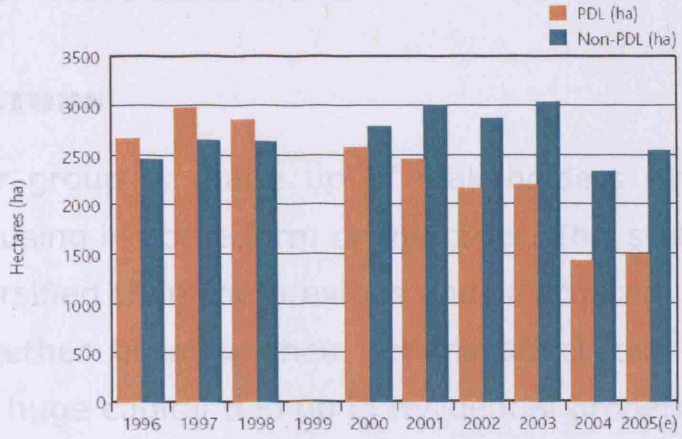
5.1. HOUSING SUPPLIERS

The 5 actors in this stakeholders group were identified based on their role in the brownfield development & regeneration process. They are mostly involved in the physical production and supply of new housing; they are also part of the body of actors in the construction industry as a whole. The high percentage of new housing required to be developed on Brownfield sites ensure that a large part of their business activities centre around brownfield development.

The housebuilding industry is expected to deliver 240,000 new homes annually by 2016. To meet this demand, Calcutt (2007) estimates industry growth to be at a rate of 4.75% compounded over the next 5 years to achieve this. The industry goes through stages of growth and decline, for example as at 1973, house prices were on the rise and development increased output, the 1974 economic crash saw housing starts halve and land price falls. This caused a number of housebuilding firms both large and small to fail. Others merged and became large enough to withstand the economic crisis and were able to take over significant shares of the market during and after this period. Calutt (2007) believes a growth rate of 4.75% compounded for the industry is achievable, this is because most housebuilders employ a "current trader" business model where their development activities are predominantly dependent on land acquisition, development and outright sale via speculation of local market(s) trends and need. To achieve this however, they would need to mitigate against risks that would hinder this rate of growth: Project risk, Market risk & Planning risk.

Although there are other business models that can aid the growth of the industry, none can achieve it without an adequate supply of development land. Current policy encourages over 70% of new housing developments to be on previously developed land, this will control and most likely hinder the availability of land for housing developers and their ability to grow at the required rate of 4.75% compounded over 5 years to achieve the delivery of 240,000 homes by 2016. Evidence of this happening can already be seen from the volume PDL and non PDL land that have been developed for residential use in England. The diagram below shows the trend of PDL and non PDL sites for residential development in England.

Fig 13 **Land developed for residential use, 1994-2006: England**



Source: Calcutt Review 2007

Chapter 3 of this report estimated PDL availability in London to be on the decline and found that the city could run out of brownfield sites within a period of 5 years at a replenishment rate of 8%. The graph above reflects this decline from the volume of land developed for residential use all over England. Both the CLG and the Calcutt Review (2007) have recorded the likelihood of unavailability of developable land for the 2016 housing target. In a way, this brings the measures to relieve the housing supply issue of land availability back to a full circle, albeit on a smaller scale.

5.2. REGULATORY AUTHORITIES & INTEREST GROUPS

The 3 actors within this stakeholder group: Government Agencies, Local & Regional Authorities and Amenity & Environmental Groups, help to estimate and regulate the need and supply of homes. They function interdependently via numerous means, i.e. surveys and data collection. Their activities help to estimate housing needs and requirements as well formulate policies and regulations that ensure all the actors in the housebuilding industry function and deliver with the aim of improving communities and delivering adequate housing. For example, the National Housing and Planning Advice Unit (NHPAU) which was set up to help provide a more secure analytical foundation for needs assessments.

5.3 INVESTORS

The investor group is made up of stakeholders who invest their money in housing in some form or the other. This stakeholder group is more diversified than the previous ones discussed. The actors are grouped together because their actions affect the economy as a result of the huge capital tied up in residential property in the U.K.

Occupiers (owner & rental) play a major role in the generation of capital and capital gains in the housing market. They depend on lenders to have access to mortgages and loans towards buying, part buying and improving their homes.

Capital Investors are either of 2 types: Individuals who buy houses for the buy to let market and individuals & organisations who own shares in publicly quoted housebuilding companies, companies quoted on the alternative investment market and privately owned companies. The top housebuilding companies who produce majority of the homes in the housing market are quoted in either of the 2 markets or privately owned amongst owner(s) in

privately owned companies. 16 of the 28 largest housebuilding companies operate in London, 10 of them are quoted on the London stock exchange. A lot of their business activity is driven by the need to declare profits to their shareholders, their ability to deliver this is dependent on their forms of business practice. The most common of this amongst the large house building firms is to hold 'Land Banks' which allow them to control the delivery of new homes into the market. Their influence thus turns Oligopolistic in the market place. Governments specified PDL development for new housing limits their freedom to develop on Greenfield sites, this is because their land dealings for years has been geared towards acquiring greenfield sites. Newer strategies to acquire and develop brownfield sites have unearthed a host of issues that make brownfield development unattractive to develop. Issues such as the remediation of contaminated sites, legal minefields ownership rights, rehabilitation of existing services, geographical location e.t.c. One thing is for certain, these issues generate extensive costs that make the land value unattractive to the developer. In fairness, there have been a number of initiatives by the regulatory authorities to improve the attractiveness of brownfield sites for development, initiatives such as shared remediation costs & Negative Land Value.

Lenders are the financial organisations who make funds available to individuals and organisations in the form of loans, mortgages or stand as financial backers in large scale development projects.

Residents & Communities pay tax for the upkeep of their community to the government, it is therefore important that brownfield sites are developed in ways that improve and contribute positively to their communities economically, socially and environmentally. Apart from physically improving the environment, recent Mixed Use Schemes built on brownfield sites have been able to help keep the value of existing properties up, as well as remove

the issues that social housing generate. This is done by integrating affordable housing within new housing developments. The aim is to help improve communities by integrating people from different walks of life.

The housebuilding industry is made up of a diverse range of companies, from large ones which predominantly function nationally to small ones which focus on individual local markets. The top house building firms in London are: Taylor Wimpey, Barratt, Persimon, Bellway, Redrow, Miller, Gladedale, Bovis, Crest Nicholson, Berkeley, Lovell Patnerships, Gallifford Try, Fairview, Countryside Properties, Inspace, and Telford Homes. Out of the 16 identified, 9 of them are quoted on the London Stock Exchange. Over 83% of the new housing delivered in the UK is via private developers.

CHAPTER 6

CONCLUSION

The research question (*"Has Brownfield development as a sustainable solution to shortfalls in housing supply been effective in London so far?"*) set a scope to analyze how the issues that have complicated the delivery of housing in London have responded to the current housing policies that promote brownfield regeneration, sustainable development and affordable housing.

As a background to the research, the report with evidence identified and discussed the issues that have adversely affected the delivery of new housing in London. Following this, the current sustainable solution to housing shortfall via Brownfield regeneration was analysed based on what they are and their advantages for sustainable housing delivery. A time frame for this analysis was derived from the published delivery period for new housing in The London Plan (2004 to 2016). The methodology entailed *i.* measuring the housing target against PDL availability and *ii.* Assessing the impact the process has had on the stakeholders in London.

The former was able to show that although demographic changes occur, they do so in line with population projection. It also benchmarked the projected household projection for London against the housing target and found that this was in line with the housing target set by the spatial development strategy in the Mayor's London Plan. It is quite important to not that the aim is not to ascertain the accuracy of housing provision against housing target, it would be almost impossible to provide housing to accurate

demographic figures due to the constant changes in population figures and demographic patterns in the UK.

Housing policy requires over 70% of new housing to be built on brownfields, to ascertain whether this will be hindered by shortfalls in land supply and subsequently affect the delivery of housing in key boroughs in London, this report identified the key variables that need to be affirmed before the availability of brownfield can be reconciled to the housing provision target. They are: What the housing target is in the 33 different boroughs in London, and the volume of developable brownfield sites available in London. The replenishment rate of brownfield sites as well as changes in housing target figures were taken into consideration.

The results were able to estimate that there would be a shortfall in London's brownfield supply in less than 5 years. This report shares the opinion (with Calcutt 2007) that regional housing allocations should reflect the new target promptly and work their way smoothly down into local authorities' 5-year housing land supplies. If the process for setting new regional allocations, and hence the new requirements for 5-year supplies, are delayed, there is an increasing risk that the target will not be met.

London has focused extensively on brownfield development more intensely than any other city in the UK; this has led to a wide range of actors getting involved and playing important roles in the brownfield agenda. This report identified stakeholder groups from the wide range of actors in the brownfield regeneration process by Dixon & Doak at the 2005 SUBR:IM Conference. Subsequently the effects of brownfield regeneration on the 3 groups were discussed to assess whether there have been, are or will be adverse or positive effects on stakeholders involved.

Virtually all houses have been constructed by housing developers since the early 1990s (Calcutt '07) and they function as private enterprises or are contracted to Registered Social Landlords (this percentage is small). The house building industry would have to achieve a production of about 240,000 new homes a year to meet up to the demand for new homes in the U.K. From capacity studies carried out by the Calcutt Review ('07), the industry cannot produce this, therefore the review estimates the house building industry would have to grow at a rate of 4.75%, compounded over the next nine years. This rate of growth implies taking on risks especially in sourcing new options for land. The housebuilding industry is known to avoid risks because they are predominantly speculative producers who only produce when profit can be made. To achieve this therefore, other possibilities for a sustained rate of growth in the house building industry would see developers diversifying into other 'Business Models' of house building i.e. 'The Investor Model' & 'The Self Build Model'. The Investor Model of house building is becoming increasingly popular and has helped developers retain a share of future capital gains on their new development projects, while the latter makes up around 10% of the new build statistics (Calcutt 2007). Further review and research towards sustained growth of the house building industry for UK is needed.

The report also identified that Local Authorities are more of regulatory bodies and hardly engage in housing development, their role is important in the timely processing of Planning Applications, the early identification and processing of brownfield sites to improve the 8% replenishment rate. Most importantly however, there needs to be more research into developing more schemes in partnership with housing developers towards remediation costs for brownfield sites. Government agencies and interest groups have played an

important and commendable role in resolving the housing issues, there is however room for improvement in monitoring the stock and flow nature of brownfield sites.

In conclusion this report finds that for London to achieve it housing target by 2016, there would need to be extensive work done into alternative sources of land supply and a sustained growth of the housebuilding industry.

Of all the actors in the brownfield regeneration and development process, the housebuilding industry has the greatest role to play. Its production capacity as an industry is crucial to realise the housing target set for London in the London Plan. This is a scenario that may not be achieved in the immediate future. In light of the recent downturn in the economy a sustained 4.75% growth rate will most likely not be achievable in the housebuilding industry. The effects of the economic recession that started late in 2007 has slowed down financial activities in the housing market. As a result numerous housebuilding firms have slowed down the production of new housing developments to the extent that planned construction starts have been halted until the general outlook on the economy starts to pick up. Industry capacity will not be able to produce the required volume and type of housing until this time. The strategy therefore should be for the Government and the Industry to lay down plans for a sustained industry growth after the economy picks up.

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APPENDICES

Appendix 1

Population Projection per Borough: London 2007

Boroughs	All ages	Children	Working age	Older people
	Mid-2006	0-15	16-64M/59F	from 65M/60F
Camden	227.5	35.5	167.2	24.8
Islington	185.5	30.3	134.9	20.3
Kensington and Chelsea	178.0	27.5	124.2	26.4
Lambeth	272.0	48.9	195.5	27.6
Southwark	269.2	48.9	190.9	29.4
Wandsworth	279.0	43.0	204.4	31.5
Westminster	231.9	30.0	171.8	30.1
CENTRAL	**1,643.1**	**264.1**	**1,188.9**	**190.1**
City of London	7.8	0.7	5.9	1.2
Barking and Dagenham	165.7	39.5	101.8	24.4
Bexley	221.6	44.9	135.5	41.2
Greenwich	222.6	46.3	145.7	30.7
Hackney	208.4	46.1	140.6	21.6
Havering	227.3	43.4	137.5	46.4
Lewisham	0.0	255.7	50.5	175.3
Newham	248.4	58.6	165.9	23.9
Redbridge	251.9	53.9	159.8	38.2
Tower Hamlets	212.8	44.2	148.9	19.8
EAST	**1,766.5**	**633.3**	**1,192.1**	**422.7**
Brent	271.4	50.6	183.6	37.2
Ealing	306.4	57.6	208.3	40.5
Hammersmith and Fulham	171.4	27.6	123.3	20.5
Harrow	214.6	41.8	137.0	35.8
Hillingdon	250.0	51.1	159.6	39.2
Hounslow	218.6	42.7	147.6	28.3
WEST	**1,432.4**	**271.4**	**959.4**	**201.5**
Barnet	328.6	66.5	209.2	52.9
Enfield	285.3	59.6	181.6	44.1
Haringey	225.7	43.8	156.9	25.0
Waltham Forest	221.7	46.7	146.6	28.5
NORTH	**1,061.3**	**216.6**	**694.3**	**150.5**
Bromley	299.1	59.0	182.1	58.0
Croydon	337.0	70.1	216.2	50.6
Kingston upon Thames	155.9	28.1	105.4	22.4
Merton	197.7	36.1	134.2	27.4
Richmond upon Thames	179.5	34.8	117.7	27.0
Sutton	184.4	36.9	117.5	30.0

SOUTH	1,353.6	265.0	873.1	215.4
GREATER LONDON	8689.3	1666.1	5816.7	1206.4

Office of National Statistics: www.statistics.gov.uk

Appendix 2

Population & Household Projection per Borough: London

Boroughs	Population (thousands)		Original Households		Benchmrkd H/holds		Change	Annual Change
	2001	2016	2001	2016	2001	2016	2001-2016	2001-2016
Camden	196.1	217.9	93.1	107.5	92.2	102.7	10.5	0.7
Islington	188.3	210.2	85.5	99.3	84.8	94.7	9.9	0.7
Kenstn. & Chels.	167.4	175.6	83.7	92.5	83.2	88.5	5.3	0.4
Lambeth	276.1	310.5	126.9	149.3	126.1	141.8	15.7	1
Southwark	245.3	275.2	109.3	126.8	109.1	122.4	13.3	0.9
Wandsworth	279.7	301.7	122.2	137	122.9	132.7	9.8	0.7
Westminster	215.2	234.6	103	117.5	102.2	111.8	9.5	0.6
CENTRAL	**1566.1**	**1725.8**	**723.7**	**829.9**	**720.5**	**794.5**	**74**	**4.9**
City of London	6.9	8.4	3.2	4.2	3.3	4	0.8	0.1
Barking & Dag.	167.2	187.3	66.6	77.4	66.8	74.9	8.1	0.5
Bexley	224.3	238.1	91.5	102.6	90.3	95.9	5.6	0.4
Greenwich	222.3	253.7	93	112	92.1	105.1	13.1	0.9
Hackney	203.4	220.6	87.5	97.9	87.1	94.5	7.4	0.5
Havering	232.2	251.1	95	107.1	93.2	99.4	6.2	0.4
Lewisham	252.4	271.9	110.2	123	109.8	118.3	8.5	0.6
Newham	238.8	266.8	91.3	105.8	90.4	101	10.6	0.7
Redbridge	237	264.8	94.2	109.9	93.6	104.7	11.1	0.7
Tower Hamlets	207.4	257.5	85.3	111.8	83.5	103.7	20.2	1.3
EAST	**1994.7**	**2220.2**	**817.9**	**951.7**	**810**	**901.5**	**91.5**	**6.1**
Brent	255.4	281.6	102.5	119.1	101.5	112	10.5	0.7
Ealing	308.4	338.7	124.5	143.6	124	136.2	12.3	0.8
H.smith&Fulham	165.5	175.9	76.7	84.2	77.6	82.5	4.9	0.3
Harrow	217.7	231.4	84.1	94.1	83.6	88.9	5.3	0.4
Hillingdon	257.3	277	103.8	117.1	103.1	111.1	8	0.5
Hounslow	216.3	237.4	86	98.5	86.1	94.5	8.4	0.6
WEST	**1020.6**	**1542.1**	**577.7**	**656.7**	**575.9**	**625.3**	**49.3**	**3.3**
Barnet	335.7	369	132.2	153	132.1	145.4	13.3	0.9
Enfield	279.7	303.8	112.3	127.3	112.1	121.8	9.7	0.6
Haringey	224.9	256.4	97.5	115.5	97.2	110.6	13.6	0.9
Waltham Forest	225.1	245.9	94.1	107.4	93.7	102.4	8.7	0.6
NORTH	**1065.4**	**1175.1**	**436.1**	**503.3**	**435.1**	**480.5**	**45.3**	**3**
Bromley	306.6	336.1	128	146.3	127.5	139.8	12.3	0.8
Croydon	342.9	375.2	142.5	165.3	140.4	153.6	13.2	0.9
Kingst. upn Thames	151.2	162.4	62.1	69.5	62.5	67.2	4.7	0.3
Merton	189.9	209.6	78.8	91	79	87.2	8.2	0.5
Rich.upon.Thames	190.6	204.3	81.6	90.6	82.7	88.7	6	0.4
Sutton	182.6	1908.3	76.6	87.8	76.1	82.7	6.6	0.4
SOUTH	**1363.9**	**1485.9**	**569.5**	**650.5**	**568.1**	**619.2**	**51.1**	**3.4**
G LONDON	**7410.8**	**8149.1**	**3124.8**	**3592.1**	**3109.7**	**3421**	**311.3**	**10.7**

Office of National Statistics: www.statistics.gov.uk

Appendix 3

Housing Target per Borough: London 2004 & 2006

2004	1997-2016	annual	2006	1997-2016	annual
Camden	16940	850	Camden	5,950	595
Islington	18070	900	Islington	11,600	1,160
Kensington & Chelsea	10800	540	Kensington & Chelsea	3,500	350
Lambeth	28910	1450	Lambeth	11,000	1,100
Southwark	29530	1480	Southwark	16,300	1,630
Wandsworth	16470	820	Wandsworth	7,450	745
Westminster,	19480	970	Westminster,	6,800	680
Central	**10,800**	**540**	**Central**	**62,600**	**6,260**
City of London	2100	110	City of London	900	90
Barking & Dagenham	10110	510	Barking & Dagenham	11,900	1,190
Bexley	5520	280	Bexley	3,450	345
Greenwich	16090	800	Greenwich	20,100	2,010
Hackney	14310	720	Hackney	10,850	1,085
Havering	6900	350	Havering	5,350	535
Lewisham	17350	870	Lewisham	9,750	975
Newham	17770	890	Newham	35,100	3,510
Redbridge	10860	540	Redbridge	9,050	905
Tower Hamlets	41,280	2070	Tower Hamlets	31,500	3,150
East	**142290**	**7140**	**East**	**137,950**	**13,795**
Brent	13510	680	Brent	11,200	1,120
Ealing	12930	650	Ealing	9,150	915
Hammersmith & Fulham	8040	400	Hammersmith & Fulham	4,500	450
Harrow	6620	330	Harrow	4,000	400
Hillingdon	8890	440	Hillingdon	3,650	365
Hounslow	9450	470	Hounslow	4,450	445
West	**59,440**	**2,970**	**West**	**36,950**	**3,695**
Barnet	17780	890	Barnet	20,550	2,055
Enfield	13180	660	Enfield	3,950	395
Haringey	19370	970	Haringey	6,800	680
Waltham Forest	9140	460	Waltham Forest	6,650	665
North	**59,470**	**2,980**	**North**	**37,950**	**3,795**
Bromley	11450	570	Bromley	4,850	485
Croydon	17020	850	Croydon	11,000	1,100
Kingston upon Thames	6710	340	Kingston upon Thames	3,850	385
Merton	8610	430	Merton	3,700	370
Richmond upon Thames	5360	270	Richmond upon Thames	2,700	270
Sutton	7400	370	Sutton	3,450	345
South	**56,550**	**2,830**	**South**	**29,550**	**2,955**
Greater London	**457,950**	**23,000**	**Greater London**	**305,000**	**30,500**

London Plan 2004/2006

- early text could have had more references.
- newbuild not put into the context of total transactions
- 'social housing' has not really replaced public housing (it has just disappeared)
- patterns have changed over time but generally have not really been matched to demand
- a bit out of date - [illegible], [illegible] [illegible] but prob. OK.
- abbreviations - could have done with a glossary.
- some parts need more discussion/explanation; some possibly have too much!